

## **SECTION B. TECHNOLOGY-BASED CSS REQUIREMENTS**

The permittee is required to control combined sewer overflows in accordance with the CSO Policy (April 1994). The permittee shall comply with the nine minimum technology-based conditions set forth below.

### **1. Nine Minimum Controls (NMC) Program**

- a. Operation and Maintenance - The permittee shall implement proper operation and maintenance programs for the sewer system and all CSO outfalls, in accordance with the program set forth below, with consideration given to the following: regular sewer inspections, sewer, catch basin and regulator cleaning; equipment and sewer collection system repair or replacement, where necessary; and disconnection of illegal connections.
  - (i) Maintain a CSS inventory. Prepare an inspection plan and submit updated inventory information with each annual report as follows:
    - (a) List of CSO outfalls and emergency relief locations from Part III, Section A, COMBINED SEWER SYSTEM - GENERAL of the permit.
    - (b) Combined Sewer Overflow Structures. Include designation, location, description of operation, capacity and diagram or drawing of each structure. Include similar information for each inflatable dam.
    - (c) Outfall Structures. Include designation, location and description of each structure. Include a diagram or drawing and a picture as available and practicable. Describe outfalls characteristic at high and low tide (e.g., submerged, partially submerged, not submerged). Identify whether or not each structure is equipped with a tide gate.
    - (d) Supervisory Control and Data Acquisition (SCADA) System. Include a functional description, and list of information provided by the SCADA system for the CSS.
    - (e) Rain Gages. List location and description of rain gauges installed within the CSS,
  - (ii) Inspect CSS control structures (regulator structures and tide gates) at least once per month.

- (iii) Inspect pumping stations at least once per month.
  - (iv) Inspect Northeast Boundary Swirl Facility at least once per month.
  - (v) Inspect inflatable dams and CSS SCADA system at least once per month.
  - (vi) Develop an inspection program for the major combined sewers where each major combined sewer is inspected on a rotating schedule of sufficient frequency to maintain capacity requirements.
  - (vii) Inspect outfall structures annually.
  - (viii) Following rehabilitation operate and maintain the Main, “O” Street, Potomac and Poplar Point and Eastside Pumping stations to provide firm pumping capacities of 240 MGD, 45 MGD, 460 MGD 45 MGD and 45 MGD respectively.
- b. Use Collection System for Storage
- Operate and maintain inflatable dams to optimize storage in the CSS.
- c. Pretreatment Program
- (i) Use pretreatment regulations to control any industrial discharges that may be identified as impacting CSOs.
  - (ii) Use pretreatment regulations to require permitted significant industrial users (SIUs) discharging directly to the CSS to establish management practices to limit (e.g., use of control, detention or prohibition) batch discharges during wet weather conditions to the maximum extent feasible. Conduct an annual inspection of the above users to identify the existence of any batch discharges. Evaluate batch discharges identified to determine whether and to what extent limitations are appropriate during wet weather, taking into consideration volume, frequency, characteristics and the need to protect life and property.
- d. Maximize Flow to the Blue Plains WWTP (BPWWTP) for Treatment
- (i) During wet weather, operate the pumping stations and collection system to deliver the maximum flow possible to the BPWWTP within the constraints of the pumping stations, configuration and capacity of the collection system, and the capacity of the treatment plant. Develop a reporting system to show that operation of the pumping stations has been maximized during wet weather and that the maximum flow possible is

being delivered to the BPWWTP for treatment within the constraints of the pumping stations, collection system and treatment plant. Report such operations for each wet weather event.

- (ii) Maintain pumps to maximize flow to Blue Plains.

e. Eliminate Dry Weather Overflows (DWOs)

- (i) Dry weather overflows from CSO outfalls are prohibited. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.
- (ii) Maintain a program to enlist public support for reporting DWOs.
- (iii) Receive reports of DWOs on a 24- hour basis. Each dry weather overflow confirmed by the Permittee shall be reported to District of Columbia Department of Health (DOH) and EPA Region III within 24 hours.

f. Control Solid and Floatable Materials in CSOs

- (i) Screen pumped overflows at the Main and O Street Pumping Stations.
- (ii) Screen flow into the Northeast Boundary Swirl Facility.
- (iii) Operate and maintain end of pipe solid and floatable BMP demonstration controls until termination of the demonstrations at locations as follows:

End of pipe netting system at CSO Outfall 018. Bar rack at CSO Outfall 041 at Structure Number 62.

Bar rack at CSO Outfall 040 at Structure 61. Inspect BMP demonstration controls at least once per month. Clean BMPs following wet weather events on a schedule that maintains capture functions.

- (iv) Clean 85 percent of the 8200 catch basins in the combined sewer area at least annually. Inspect catch basins in CSO areas tributary to the Anacostia River at least 2 times per year and clean more frequently as identified by inspections.

The Anacostia River CSO areas inspection schedule is an interim schedule until permanent solids and floatable control facilities are placed in operation as part of the Long Term Control Plan. As permanent facilities

are placed in operation, in each combined sewer area, the permittee may petition EPA to reduce the cleaning frequency to once per year in that area.

- (v) Operate the Anacostia River Floatable Debris Removal Program. This program comprises pick up of debris by skimmer and support boats on a regular weekly schedule, weather and river conditions permitting.
- (vi) Work on a regular and ongoing basis with the D.C. Department of Public Works (DPW) and the National Park Service (NPS) to maximize litter control in the CSS, targeting neighborhoods that contribute disproportionate amounts of trash to the CSS. Document these efforts in quarterly CSO reports.
- (vii) Implement an ongoing, appropriate bi-lingual (English and Spanish) public education program aimed at reducing litter in the CSO sewershed, including public service announcements, public school presentations and stenciling programs.
- (viii) Hold at least four (4) public education workshop programs each year, two of which shall be held in the Anacostia River CSO areas, (e.g., at schools or to community groups) to inform the public on ways and means for the public to assist in reducing the amount of solid and floatable materials in CSOs. The workshop programs comprise a series of presentations four times per year. The need to continue these workshop programs and the schedule will be re-evaluated every 2 years and the permittee may petition EPA to reduce the number of workshops for the following two year cycle.

g. Pollution Prevention

- (i) Conduct regular public education programs to advise citizens of proper disposal of substances (e.g., household wastes, plastics, paper products, oils, leaves and the use of fertilizer).
- (ii) Conduct tours of the BPWWTP to educate public on aspects of CSO control that can be enhanced with public assistance.
- (iii) Use the pretreatment program to encourage industrial waste reduction through recycling and improved housekeeping.
- (iv) Notify responsible agencies to enforce regulations that prohibit entrance into the CSS of any substance that may impair or damage the function and performance of collection and treatment systems.

- (v) Coordinate where feasible and practicable WASA's pollution prevention programs with those of D.C. government agencies such as the following partial list of pollutant prevention programs conducted by District of Columbia government agencies:
  - A. Department of Public Works Programs
    - 1. Curbside recycling
    - 2. Leaf pickup
    - 3. Public trash receptacles
    - 4. Household hazardous waste collection
    - 5. Residential bulk refuse collection and self-service disposal
    - 6. Campaign against rats
    - 7. Support of community cleanup programs ("Helping Hand")
    - 8. Enforcement of illegal dumping operations
    - 9. Street cleaning and sweeping
    - 10. Public education for DPW Solid Waste Education and Enforcement Program ("SWEEP")
  - B. Department of Health Programs
    - 1. Public education and assistance
    - 2. Enforcement of storm water and erosion/sedimentation control regulations
- h. Public Notification
  - (i) Install and operate a light on the Anacostia River and a light on the Potomac River to notify river users of CSO events. Locate the lights at or in view of major public access points subject to approval of owners or agencies having jurisdiction (e.g., private property owners, Coast Guard, NPS, DOH). Lights will be operated by a signal from a representative CSO outfall on each river. A light (color A) will be illuminated during a CSO occurrence and a second light (color B) will be illuminated for 24 hours after a CSO has stopped. Final colors shall be subject to approval by the Coast Guard or other agency having jurisdiction.
  - (ii) Maintain a website with information on: (a) nature of CSO discharges; (b) locations of CSOs; (c) potential health threats of CSOs; (d) record of CSO events by outfall with number, average duration and volume for the prior three month calendar quarter based on modeled results; (e) description of light system on the Anacostia River and Potomac River that advises river users of times that CSOs are actually occurring; and (f) nature and duration of conditions potentially harmful to users of receiving waters

during and after a CSO event.

- (iii) Prepare and distribute semi-annually in sewer bills an informational pamphlet with information similar to that listed under h.ii above.
- (iv) Distribute a pamphlet semi-annually to locations (e.g., boathouses, marinas, water sports shops) frequented by receiving water users. The pamphlet shall include information similar to that listed under h.i above. Distribution will be to the extent permitted by owners of the locations.
- (v) Prepare and maintain an information bulletin to distribute to callers requesting information on the CSS and CSOs.
- (vi) Include updates and status of CSS and CSO plans and programs in information distributed under h. i, ii, iii, and iv above.
- (vii) Maintain warning signs at all CSOs. The wording, size, location and other aspects of such signs shall be as agreed to among WASA, EPA, the NPS and DOH.

i. Monitoring

- (i) Operate and maintain the SCADA system that monitors activation of selected CSO outfalls.
- (ii) Conduct visual wet weather surveys at the Main and O Street Pumping Stations CSO outfalls to assess the discharge of floatables.
- (iii) Monitor and record debris removed by the Anacostia River Floatable Debris Removal Program.
- (iv) Monitor and record flow, screenings removal and disinfection at the Northeast Boundary (NEB) Swirl Facility.
- (v) Monitor and record demonstration floatables removal; (a) at the end of pipe netting system at Outfall 018; (b) at bar rack at Outfall 041; and (c) at the bar rack at Outfall 040 for the duration of the demonstration project.
- (vi) Monitor and record rainfall at a minimum of four (4) locations in the CSS. Locate rain gages at sites which are different from those used in the development of the LTCP. Report the number, volume and average duration of overflows for each active CSO outfall. The information shall be prepared using the latest model of the CSS, based on the measured storm event data and the operation of the inflatable dams for the previous

calendar year.

**SECTION C. LONG TERM CONTROL PLAN (LTCP)**

1. The LTCP for the District of Columbia CSS is intended to control CSO discharges to meet the District of Columbia water quality standards in the Anacostia River, Rock Creek and its Pine Branch tributary and the Potomac River.
2. The LTCP is the recommended plan included in the *Combined Sewer System Long Term Control Plan, Final Report, July 2002*, submitted by the permittee to EPA and the DOH.
- A. Permittee shall implement and effectively operate and maintain the CSO controls identified in the LTCP.
  1. The LTCP for the District of Columbia CSS provides for the control of CSO discharges to the Anacostia River, Rock Creek and its Piney Branch tributary and the Potomac River. The LTCP facilities for controlling discharges to the above named receiving waters include, among other things, diversion structures, a system of underground storage tunnels, pumping stations and outfall structures. The facilities shall, within the capacities provided, divert combined sewer flows to the storage tunnels, store combined sewer flow and convey stored combined sewer flow to Blue Plains for treatment.
  2. The permittee shall effectively operate and maintain the LTCP CSO control facilities in accordance with the conditions set forth below.
  3. Discharges from CSO outfalls are prohibited except during wet weather events when one or more of the following conditions exist:
    - a. Combined Sewer System Flow (CSF) conditions exist at Blue Plains, then discharges may occur at Outfall 003. CSF conditions are those described at Part I.B.(1)(1a)(b) of this permit.
    - b. The associated storage tunnels serving individual CSO outfalls are filled to minimum capacity required.
    - c. Combined sewer flow is being transferred from individual CSO outfalls to the associated storage tunnel or interceptor at not less than minimum diversion rates listed below.
  4. Solids and floatables capture shall be provided for all overflows prior to

discharge to receiving waters.

5. All combined sewer flow stored in the Anacostia River, Rock Creek and the Potomac River storage tunnels shall be emptied within 59 hours of the end of a wet weather event. If another wet weather event occurs before 59 hours has elapsed, the 59- hour period shall start from the end of the last wet weather event that occurred. A wet weather event occurs as a result of stormwater runoff, including snow melt, entering into or being conveyed in the CSS. All flow stored in the storage tunnels and appurtenant structures shall be conveyed to Blue Plains for treatment.
6. Storage tunnels shall have minimum capacities as follows:
  - a. Anacostia Tunnel - 126 million gallons
  - b. Piney Branch Tunnel - 9.5 million gallons
  - c. Potomac Tunnel - 58 million gallons
7. Minimum diversion capacities from CSO outfalls to storage tunnels or interceptors and monitoring of diversions shall be as follows:

a. Anacostia CSO Control Systems

<i>CSO Outfall</i>	<i>Drainage Area</i>	<i>Minimum Diversion Capacity for CSO Control (mgd)</i>	<i>Diversion to Tunnel or Interceptor</i>	<i>Monitoring</i>
005	Fort Stanton	37	tunnel	(2)
006	Fort Stanton	to be separated	n/a	n/a
007	Fort Stanton	111	tunnel	(3)
009	Canal Street	36	tunnel	(2)
010	B St/NJ Ave	690	tunnel	(3)
011	B St/NJ Ave	460	tunnel	(3)
012	Tiber Creek	471	tunnel	(3)
013	Canal Street Sewer	18	tunnel	(2)
014	Navy Yard/M St.; 6 <sup>th</sup> St-7th St	92	tunnel	(2)
015	Navy Yard/M St.; 9 <sup>th</sup> St	11	tunnel	(2)
016 <sup>(1)</sup>	Navy Yard/M St.; 12 <sup>th</sup> St - 9 <sup>th</sup> St.	86	tunnel	(2)
017 <sup>(1)</sup>	Navy Yard/M St.; 14 <sup>th</sup> St to Penn Ave	65	tunnel	(2)



018	Barney Circle	57	tunnel	(2)
019	Northeast Boundary	1,460	tunnel	(3)

b. Potomac CSO Control Systems

CSO Outfall	Drainage Area	Minimum Diversion Capacity for CSO Control (mgd)	Diversion to Tunnel or Interceptor	Monitoring
020	Easby Point	297	tunnel	(3)
021	Slash Run	530	tunnel	(3)
022	I St - 22 <sup>nd</sup> St. NW	333	tunnel	(3)
024 <sup>(1)</sup>	West of Rock Creek Diversion Sewer	66	tunnel	(2)
025 <sup>(1)</sup>	31 <sup>st</sup> & K St NW	3	tunnel	(2)
026 <sup>(1)</sup>	Water St Dist (WRC)	0	tunnel	(2)
027 <sup>(1)</sup>	Georgetown	92	tunnel	(2)
028 <sup>(1)</sup>	37 <sup>th</sup> St. Georgetown	9	tunnel	(2)
029	College Pond	133	tunnel	(3)

c. Rock Creek CSO Control Systems

CSO Outfall	Drainage Area	Minimum Diversion Capacity for CSO Control (mgd)	Diversion to Tunnel or Interceptor	Monitoring
031	Penn Ave	to be separated	n/a	n/a
032	26 <sup>th</sup> St - M St	6	interceptor	(4)
033	N St - 25 <sup>th</sup>	5	interceptor	(3)
034	Slash Run	6	interceptor	(4)
035	NW Boundary	290	interceptor	(4)
036	Mass Ave & 24 <sup>th</sup> St	29	interceptor	(3)

037	Kalamora Circle West	to be separated	n/a	n/a
038	Kalamora Circle East	5	interceptor	(4)
039	Belmont Rd	28	interceptor	(4)
040	Biltmore Rd	12	interceptor	(4)
041	Ontario Rd	14	interceptor	(4)
042	Quarry Rd	19	interceptor	(4)
043	Irving St	35	interceptor	(4)
044	Kenyon St	4	interceptor	(4)
045	Lamont St	8	interceptor	(4)
046	Park Rd	9	interceptor	(4)
047	Ingleside Terr	10	interceptor	(3)
048	Oak St/Mt Pleasant	11	interceptor	(4)
049	Piney Branch	468	tunnel	(3)
050	M St - 27 <sup>th</sup> St	21	interceptor	(4)
051	Olive-29th St	4	interceptor	(4)
052	O St - 31 <sup>st</sup> St	56	interceptor	(4)
053	O St	to be separated	n/a	n/a
054	West Rock Cr Diversion Sewer	(5)	interceptor	(4)
055	Abandoned	n/a	n/a	n/a
056	Normanstone Dr	(5)	interceptor	(4)
057	Cleveland - 28 <sup>th</sup> St & Conn Ave	33	interceptor	(3)
058	Conn Ave	to be separated	n/a	n/a
059	16 <sup>th</sup> and Rittenhouse Sts, NW	to be separated	n/a	(4)

- (1) These outfalls have been consolidated. Diversion capacity listed is that required for CSO control.
- (2) Diversion capacity validated by construction performance test, no additional monitoring required.
- (3) Continuous flow measurement of diversion and outfall. Provision for temporary sampling on diversion and outfalls.
- (4) Diversion capacities from the referenced outfalls have been estimated based on computer modeling.

- (5) These CSOs are emergency reliefs for the West Rock Creek Diversion sewer. There is no tributary drainage area, and flow diversion does not occur at these CSOs. The performance of these CSOs will be validated by computer modeling, no additional monitoring required.
8. With each DMR, report operations of the monitored CSO control facilities by systems as follows:
- a. Volume into and out of storage tunnels;
  - b. Diversion rates into storage tunnels;
  - c. Discharge rates from outfalls;
  - d. Start and end time of wet weather event;
  - e. Time when storage tunnel became filled to minimum required capacity;
  - f. All discharges from outfalls occurring prior to storage tunnel being filled to minimum required capacity and at less than minimum required diversion rates;
  - g. Volume of overflows from outfalls;
  - h. Dewatering time for tunnel following end of wet weather event;
  - i. Results of any overflow or diversion sampling.
9. Permittee shall be deemed to be in compliance with each of the following CSO control performance when:
- a. No overflows are recorded at monitored CSO outfalls prior to storage tunnels being filled to minimum required capacities;
  - b. No overflows are recorded at monitored CSO outfalls when diversion rates are less than or equal to minimum diversion capacity and associated storage tunnel is not filled to minimum required capacity;
  - c. No overflow is recorded at Outfall 003 unless CSF conditions exist at Blue Plains;
  - d. Storage tunnels shall be emptied in a time period less than or equal to 59 hours following the end of a wet weather event.

#### **SECTION D. POST CONSTRUCTION MONITORING**

The permittee shall implement a phased post-construction monitoring program to obtain information on rainfall, the volume and character of overflows and receiving waters characteristics. The monitoring phases shall be as follows:

Phase	Post-Construction Condition
1	Following the placement in operation of the inflatable dams and pumping stations rehabilitation.

2	Following the placement in operation of the Anacostia, Rock Creek and Potomac storage tunnels, respectively, as each tunnel is placed in operation.
3	Following the placement in operation of the complete CSO tunnels storage system

1. Phase I monitoring shall be in accordance with the following:

CSO Systems

<b><i>Monitoring Type</i></b>	<b><i>Anacostia River</i></b>	<b><i>Potomac River</i></b>	<b><i>Frequency (3)</i></b>
Rainfall Monitoring (1)	1 gauge in Northeast Boundary  1 gauge in Tiber Creek	1 gauge in Slash Run	continuous
CSO Overflow (flow and volume) (1)	Northeast Boundary CSO 019  B ST/NJ Ave pumped overflow CSO 010	Potomac Pumping Station CSO 021  West Rock Creek Diversion Sewer CSO 024	continuous
CSO Overflow Sampling (2)	1 sampling station at Northeast Boundary	n/a	4 storms minimum  approximately 1 hr sample
Receiving Water Monitoring - Dissolved Oxygen (4)	DO Monitors	DO Monitors	approximately 30 minute intervals
Receiving Water Monitoring - Bacteria, Field Parameters (2) (4)	Bacteria Samples	Bacteria Samples	4 storms minimum

- (1) Temporary gauges, meters and samplers to be installed.
- (2) Samples shall be analyzed for fecal coliform, enterococci, CBOD5 and TSS.
- (3) Monitoring shall be conducted for a continuous period of 12 months.
- (4) The permittee is responsible for submitting all data, however, it is acceptable to use data developed by other sources.

2. Phase 2 monitoring shall be in accordance with the following:

CSO Systems

<b><i>Monitoring Type</i></b>	<b><i>Anacostia</i></b>	<b><i>Potomac</i></b>	<b><i>Rock Creek</i></b>	<b><i>Frequency</i></b>
Rainfall Monitoring (1)	1 gauge in Northeast Boundary  1 gauge in Tiber Creek	1 gauge in Slash Run  1 gauge in College Pond	1 gauge in Piney Branch	continuous
CSO Overflow Monitoring and Diversion to Storage Monitoring (2)	Northeast Boundary CSO 019  Fort Stanton CSO 007  B ST/NJ Ave Pumped Overflow CSO 010	Potomac Pumping Station CSO 021  College Pond CSO 029	Piney Branch CSO 049	continuous
Tunnel Storage Level Monitoring (2)	1 sensor in tunnel	1 sensor in tunnel	1 sensor in tunnel	continuous
CSO Overflow Sampling (2) (3)	1 sampling station at Northeast Boundary CSO 019	1 sampling station at CSO 021	1 sampling station at CSO 049	4 storms maximum  approximately 1 hour sample interval for each storm
Receiving Water Monitoring - Dissolved Oxygen (5)	Continuous DO monitors (5)	Continuous DO monitors (5)	n/a	approximately 30 minute intervals (5)
Receiving Water Monitoring - Bacteria, Field Parameters (3)	Use data from existing monitors and establish at least 6 other locations	Use data from existing monitors and establish at least 3 other locations	Use data from existing monitors and establish at least 7 other locations	once per week for bacteria and once per quarter for all other substances

- (1) Temporary gauges to be installed.
- (2) Shall use facilities and equipment installed as part of CSO control systems.
- (3) Sampling shall be analyzed for fecal coliform, mercury, arsenic, cadmium, total chromium, copper, lead, nickel, selenium, silver, zinc, chromium VI, hardness, cyanide, pesticides, PCBs, volatiles and semivolatiles, DO, ammonia as N, TKN, total phosphorus, and ortho-phosphorus. Metals shall be analyzed as dissolved and total recoverable.
- (4) Monitoring shall be conducted for a continuous period of 12 months, in each CSO system after appropriate facilities are placed in operation.
- (5) Permittee is responsible for submitting all data, however, it is acceptable to submit data provided by other sources.

3. Phase 3 monitoring shall be in accordance with the following:

CSO Systems

<b><i>Monitoring Type</i></b>	<b><i>Anacostia River</i></b>	<b><i>Potomac River</i></b>	<b><i>Rock Creek</i></b>	<b><i>Frequency (4)</i></b>
Rainfall Monitoring (1)	1 gauge in Northwest Boundary  1 gauge in Tiber Creek	1 gauge in Slash Run  1 gauge in College Pond	1 gauge in Piney Branch	continuous
CSO Monitoring and Diversion to Storage Monitoring (2)	Northeast Boundary CSO 019  Fort Stanton CSO 007  B St/NJ Ave Pumped Overflow CSO 010	Potomac Pumping Station CSO 021  College Pond CSO 029	Piney Branch CSO 049	continuous
Tunnel Storage Level Monitoring (2)	1 sensor in tunnel	1 sensor in tunnel	1 sensor in tunnel	continuous
CSO Overflow Sampling (2) (3)	Sampling stations at CSO 019 and CSO 010	Sampling stations at CSO 021 and 020	1 sampling station at CSO 049	4 storms maximum  approx. 1 hour sample interval for each storm
Receiving water Monitoring - Dissolved Oxygen (5)	continuous DO monitors	continuous DO monitors	n/a	approx 30 minute intervals
Receiving water monitoring- bacteria, field parameters (3) (5)	establish at least 6 locations	establish at least 6 locations	7 other locations	once per week for bacteria and once per quarter for all other parameters

- (1) Temporary gauges will be installed.
- (2) Shall use facilities and equipment installed as part of CSO control systems.
- (3) Sampling shall be analyzed for fecal coliform, Enterococci, CBOD5, TSS, 127 priority pollutants, mercury, arsenic, cadmium, total chromium, copper, lead, nickel, selenium, silver, zinc, chromium VI, hardness, cyanide, pesticides, PCBs, volatiles, semi-volatiles, DO, ammonia as N, TKN, total phosphorus and ortho-phosphorus. Metals shall be analyzed as dissolved and total recoverable.
- (4) Monitoring shall be conducted for a continuous period of 12 months.
- (5) The permittee is responsible for submitting all monitoring data.

4. Results from the monitoring phases shall be used to assess the performance of CSO controls against predictions established as part of LTCP development. In general, the assessments shall include:
  1. Comparison of monitored overflow magnitude and duration with the LTCP predictions;
  2. Comparison of monitored water quality in receiving waters with LTCP predictions;
  3. Comparison of monitored CSO reductions with LTCP reductions; and
  4. Overall evaluation as to whether or not CSO controls are providing degree of control predicted for LTCP conditions and whether or not modifications or additions to the LTCP are required.

#### **SECTION E. WATER QUALITY-BASED REQUIREMENTS FOR CSOs**

1. The Long Term Control Plan (LTCP) performance standards contained in Part III, Section C.2.3. through 9. are the water quality-based effluent limits for CSO discharges. In addition, until such time as all of the selected CSO controls set forth in the LTCP have been placed into operation, and the Permittee so certifies to EPA, in writing, consistent with the Clean Water Act, Section 301(b)(1)(C), the permittee must not discharge in excess of any limitation necessary to meet the water quality standards established pursuant to District of Columbia law.

#### **SECTION F. CSO STATUS REPORTS AND SCHEDULES**

1. Progress reports are to be provided to EPA for all activities scheduled or completed in accordance with the terms of this permit. Such reports shall be submitted in quarterly and annual reports which summarize actions and activities undertaken to comply with Part III, Section B.1. and Part III, Section C of this permit (Nine Minimum Controls Program and the LTCP). Reports shall be submitted to EPA and DOH as follows:
  - a. Submit quarterly reports on the 28<sup>th</sup> day of April, the 28<sup>th</sup> day of July, the 28<sup>th</sup> day of October and the 28<sup>th</sup> day of January. Reports shall summarize information through the last day of the month prior to the month in which the report is due. The first quarterly report shall be submitted for the first full quarter following the effective date of the permit.
  - b. Submit annual reports by March 31 of each year summarizing information for the previous calendar year. The first annual report shall be submitted for the first full year following the effective date of the permit.
2. Information submitted in reports shall, in general, be prepared in a tabular format

giving dates, times and locations as applicable. The information to be reported of the Nine Minimum Controls Program shall include the following:

- a. CSS Control Structures - Number of inspections conducted, conditions observed (e.g., function normal, blockages, malfunctions, repairs needed) and maintenance and repairs performed. For blockages observed provide: the location of blockage, date and time that the blockage was discovered, date and time blockage was corrected, and whether or not a discharge from the outfall to the receiving water was observed. If a discharge was observed, provide an estimate of discharge volume.
- b. Pumping Stations - Number of inspections conducted, numbers of screens and pumps installed and numbers available for service; and preventative maintenance performed. For pumps found not to be available for service, permittee shall report the cause of unavailability, schedule for and status of repairs. For the Main and O Street pumping stations, report the results of visual wet weather surveys and record of overflow screenings.
- c. Northeast Boundary Swirl Facility - Number of inspections conducted, number of screens and swirls installed and numbers available for service; and preventative maintenance performed. Report record of flow treated and screenings removed.
- d. Inflatable Dams and SCADA System - Number of inspections conducted. Number of dams installed and number of dams operational. Occurrence of an overflow and approximate duration of overflow based on dams inflation status.
- e. Major Combined Sewers - Upon development of inspection program. Inspections planned, inspections conducted, results of inspections and description and schedule for maintenance and repairs planned and performed.
- f. Wet Weather Overflows - Report the modeled results of the number, volume and average duration of overflows for each active CSO outfall due to wet weather events.
- g. Dry Weather Overflows - Are prohibited, however, in the event that they do occur, report their location, cause, date and time discovered, action taken, date and time discharge confirmed ceased and actions taken to prevent reoccurrence of the condition causing the overflow. Include an estimate of the overflow volume.
- h. Catch Basin Cleaning - Number and location of catch basins required to



be cleaned plus the number and location of catch basins actually cleaned.

- i. Anacostia River Floatable Debris Removal Program - Number of boats available for service, number of cleaning trips, record of amount and nature of material removed.
  - j. BMP Demonstration for Solid and Floatable Control - Number of inspections conducted and conditions observed record of material removed at CSO outfalls 018, 040 and 041.
  - k. Other - Summarize actions and activities under programs for Pollution Prevention, Public Notification and Pretreatment.
  - l. Wet Weather Flows to Blue Plains WWTP - Upon development of a reporting system, report operations for each wet weather event.
  - m. CSS Litter Control - Number of meetings or conferences with DPW and NPS. Summary of topics discussed and actions adopted.
3. Report on the following quarterly:
- a. Northeast Boundary Swirl Facility
  - b. Inflatable Dams and SCADA System
  - c. Dry Weather Overflows
  - d. CSS Control Structures
  - e. Pumping Stations
  - f. Wet Weather Flows to Blue Plains
  - g. Wet Weather Overflows
  - h. CSS Litter Control
4. Report on the following annually:
- a. CSS Inventory
  - b. Major Combined Sewers
  - c. Catch Basin Cleaning
  - d. BMP Demonstration for Solid and Floatable Control
  - e. Anacostia River Floatable Debris Removal Program
  - f. TMDL Monitoring
  - g. Other

## **PART IV. SPECIAL CONDITIONS**

### **SECTION A. PRETREATMENT**

## 1. Permit Conditions for Pretreatment

- a. General Requirements - the permittee shall operate and implement an industrial pretreatment program in accordance with the Federal Clean Water Act General Pretreatment Regulations found at 40 C.F.R. 403. The program shall be implemented in accordance with the pretreatment program and any modifications made thereto shall be submitted by the permittee and approved by EPA.
- b. Annual Report and Other Requirements - The permittee shall submit an Annual Report by February 28<sup>th</sup> of each year to EPA which describes the pretreatment activities for the previous calendar year. The Annual Report shall include a description of pretreatment activities in all municipalities from which waste water is received at the permittee's POTW. At a minimum, the Annual Report shall include the following:
  - (i) Industrial Listing - The Annual Report shall contain an updated industrial listing showing all current Significant Industrial Users (SIUs) and the categorical standards, if any are applicable, to each. In addition, the report shall include a summary of any trucked or hauled wastewater accepted at the POTW including the source of the wastewater (domestic or industrial), the amount of the wastewater received on a monthly basis, any controls imposed on the users and the discharge point designated by the POTW for acceptance of such waste.
  - (ii) Control Mechanism Issuance - The Annual Report shall contain a summary of SIU control mechanism issuance, including a list of issuance and expiration dates for each SIU.
  - (iii) Sampling and Inspection - The Annual Report shall contain a summary of the number and type of inspections and sampling of SIUs by the permittee, including a list of all SIUs either not sampled or not inspected, and the reason that the sampling and/or inspection was not conducted. The Annual Report shall also contain a summary of the number of self-monitoring events reported by each SIU and a list of all SIUs that did not conduct at least two self-monitoring events and the reason why at least two self-monitoring events were not conducted.
  - (iv) SIU Compliance and POTW Enforcement - The Annual Report shall contain a summary of the number and type of violations of pretreatment standards and requirements, including local limits, and the actions taken by the permittee to obtain compliance,

including civil penalty assessments and actions for injunctive relief. The report shall state whether each SIU was in significant noncompliance, as that term is defined in 40 C.F.R. §403.8(f)(2)(vii).

- (v) Summary of POTW Operations - The Annual Report shall contain a summary of any interference, pass through, or permit violations by the POTW which may be attributed to industrial users, and actions taken to address those events. The summary shall also include sampling and analysis of treatment plant influent, effluent, and sludge for toxic and incompatible pollutants, and an assessment of the need for changes to the pretreatment program based on this data.
  - (vi) Pretreatment Program Changes - The Annual Report shall contain a summary of any changes to the approved program and the date of submission to the Approval Authority.
  - (vii) As part of the annual pretreatment report and updates, include results of inspections, and identification and evaluation of batch discharges directly to the CSS. Include a list of permitted users with batch discharge control conditions during wet weather.
- c. Pretreatment Monitoring - The permittee shall conduct monitoring at its pretreatment plant that, at a minimum, includes quarterly influent, effluent and sludge analysis for all pollutants for which a local limit exists, as well as an annual priority pollutant scan on the influent and sludge. This monitoring data shall be included in the Annual Report.
- d. Notification of Pass-Through or Interferences - The permittee shall notify EPA and DOH, in writing, of any instance of pass-through or interference related to an industrial discharge from an IU into the POTW. The notification shall be attached to the DMR submitted to EPA and shall describe the incident, including the date, time, length, cause (including responsible user if known), and the steps taken by the permittee and the IU (if identified) to address the incident. A copy of the notification shall also be sent to the EPA at the address provided below.
- e. Headworks Analysis - The permittee shall submit to EPA a reevaluation of its local limits based on a headworks analysis of its treatment plant within one year of permit issuance. The list of pollutants to be evaluated, as well as a sampling plan for the collection of necessary data, shall be submitted to EPA within 3 months of issuance. Within 4 months of acceptance of the headworks analysis by EPA, the permittee shall adopt the revised local

limits and notify all contributing municipalities of the need to adopt the revised local limits.

- f. Changes to Pretreatment Program - EPA may require the permittee to submit for approval changes to its pretreatment program if any one or more of the following conditions is present:
  - (i) The program is not implemented in accordance with 40 C.F.R. Part 402;
  - (ii) Problems such as interference, pass-through, or sludge contamination develop or continue;
  - (iii) Federal, State or local requirements change.
- g. Correspondence - Pretreatment correspondence shall be submitted to EPA at the following address:

Pretreatment Coordinator (3WP24)  
U. S. Environmental Protection Agency  
1650 Arch Street  
Philadelphia, PA 19103 - 2029

## **SECTION B. STANDARD SLUDGE CONDITIONS**

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including 40 C.F.R. 503 and 40 C.F.R. 258 which are hereby incorporated as part of the permit by reference, and the Clean Water Act (CWA) Part 405(d) technical standards.

If an applicable management or practice or numerical limitation for pollutants in sewage sludge more stringent than existing federal and state regulations is promulgated under Part 405(d) of the CWA, this permit shall be modified to conform to the promulgated regulations.

2. The permittee shall give notice to the Director of any change(s) planned or in the permittee's sludge use or disposal practice.
3. A change in the permittee's sludge use or disposal practice is a cause for modification of the permit. It is a cause for revocation and reissuance of the permit if the permittee requests or agrees.
4. The permittee shall submit an annual sludge report containing the information required in 40 C.F.R. 503 by February 19 each year. The report shall cover the

previous calendar year. The sludge report shall be submitted to”

U.S. EPA, Region III  
Water Protection Division  
Office of Compliance and Enforcement (3WP30)  
1650 Arch Street  
Philadelphia, PA 19103 - 2029

### **SECTION C. CHLORINATION/DECHLORINATION**

1. The permittee shall report chlorine dosage (on a pound basis) per discharge event on Outfall 001. Dosage figures shall be submitted with the DMR for the month of the discharge event.
2. The concentration of Total Residual Chlorine (TRC) in the final effluent after dechlorination shall not exceed not-detectable. The permittee is required to achieve non-detectable for TRC as measured by 0.10 mg/l.

When the TRC concentration in the final effluent results in a detectable measurement (above 0.10 m/l) the permittee shall take immediate steps to achieve a non-detectable concentration.

The permittee shall resample TRC within one hour after the original grab sample measurement. If this grab sample shows a non-detectable amount as measured by 0.10 mg/l or less, then the original sample shall be considered in compliance. If this grab sample shows a detectable amount, above 0.10 mg/l, then the permittee shall retest in the second hour after the original non-compliance. If this grab sample in the second hour after the original non-compliance shows a not detectable amount as measured by 0.10 mg/l or less, then the sample shall be considered in compliance, but if the grab sample is above 0.10 mg/l then it will be considered a violation and recorded on the DMR. Each subsequent hourly sample above 0.10 mg/l shall be enumerated on the DMR until the effluent returns to compliance.

Whenever there is an initial detectable TRC concentration, all subsequent sampling results shall be tabulated and reported with the DMRs and the time required to achieve the TRC of 0.10 mg/l. The analytical method used and the detection limit for each sample should be included on the data tabulation.

For purposes of reporting on the DMR form, a non-detectable result shall be reported as zero. For a violation(s) of the limit, the maximum chlorine residual for the month and the total number of excursions in that month

should be recorded in the appropriate column on the DMR form. The permittee shall operate the dechlorination facilities in a manner which will ensure continuous compliance with the TRC non-detectable limit.

All analytical testing for TRC shall be in accordance with 40 C.F.R. Part 136, Amperometric Titration or DPD Ferrous Tritrimetric Method.

#### **SECTION D. MERCURY - OUTFALL 002**

Based upon mercury levels measured during 1997, 1998 and 1999 in Blue Plains effluent and the results of two edible fish tissues studies, the requirement for annual fish tissue studies is suspended.

#### **SECTION E. TOTAL NITROGEN**

1. The District of Columbia, as a signatory to the 1987 Chesapeake Bay Agreement, the 1992 Amendments to the Chesapeake Bay Agreement and the Chesapeake 2000 Agreement, supports the goal of reducing nutrients to the Chesapeake Bay. Since 1997, WASA has employed nitrogen removal at its Blue Plains AWWTP. Under the permit issued January 24, 2003, has been operating under the voluntary goal of meeting an annual total nitrogen mass load of 8,467,2000 pounds per year.
2. The total nitrogen goal shall be 5,800,000 pounds per year.
3. The following is a schedule to move nitrogen removal forward to achieve the final Chesapeake Bay allocation. All deadlines are based upon the effective date of this permit modification.

#### **Schedule:**

<b>Activity</b>	<b>Deadline</b>
Submit a draft comprehensive total nitrogen/wet weather technical plan to EPA	60 days
Initiate pilot studies to support draft technical plan	60 days
Submit final comprehensive total nitrogen limits/wet weather technical plan to EPA	90 days
Initiate operation of testing facilities	180 days

Submit total nitrogen Action Plan and Schedule to EPA. <sup>(1)</sup>	365 days
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<sup>(1)</sup> The Action Plan shall include a timetable to reduce existing total nitrogen effluent goal and achieve DC Tributary Strategy based total nitrogen limits.

Total nitrogen shall be calculated as follows:

Total nitrogen = Total Kjeldahl nitrogen + NO<sub>2</sub> as N + NO<sub>3</sub> as N

## **SECTION F. STORM WATER MANAGEMENT**

### **A. Storm Water Pollution Prevention Plan**

#### **1, General**

A Storm Water Pollution Prevention Plan ( SWPPP) shall be developed for this facility. The SWPPP shall be prepared in accordance with good engineering practices, and in accordance with the factors outlined in 40 C.F.R. 125.3(d)(2) or (3), as appropriate. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with sludge handling operations or other portions of the waste water treatment plant as appropriate.

In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with sludge handling or other activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee must implement the provisions of the storm water prevention plan required under this part as a condition of this permit.

#### **2. Deadline for Plan Preparation and Compliance**

The SWPPP shall be prepared, implemented and submitted to EPA Region III within 90 days after the effective date of this permit. If construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as possible, but no later than 3 years after the effective date of the permit. Upon a showing of good faith, EPA may establish a later date, in writing, for preparing and complying with the review.

#### **3. Plan Review**

The plan shall be retained on site at the facility. The permittee shall make plans available upon request to the EPA. The EPA may notify the permittee at the time that the plan does not meet one or more of the requirements of this Part. Such notification shall identify those provisions of the permit that are not being met by the plan, and identify which provisions of the plan require modification in order to meet the minimum requirements of this Part. Within 30 days of such notification, the permittee shall make the required changes to the plan and shall submit to EPA a written certification that the requested changes have been made.

4. Plan Modification

The permittee shall amend the plan whenever;

- a. There is a change in design, construction, operation or maintenance which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; or
- b. EPA notifies the permittee of its finding that the SWPPP is inadequate in eliminating or minimizing pollutants from identified sources, or that the SWPPP is inadequate to prevent the facility from causing, or having a reasonable potential to cause or contribute to a violation of the D.C. Water Quality Standards.

5. Contents of the Plan

The plan, at a minimum, shall include the following items;

- a. Pollution Prevention Team - the plan shall identify a specific individual or individuals within the facility organization as members of a storm water pollution prevention team that is responsible for developing the plan and assisting the facility or plant manager in its implementation, maintenance and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.
- b. Description of Potential Pollutant Sources - the plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. The plan shall identify all activities and significant materials which may potentially be significant pollutant sources. The plan shall include at a minimum:
  - (i) Drainage - a site map indicating an outline of the portions of the



drainage area of each storm water outfall that are within the facility boundaries, each existing structural control measure to reduce the pollutants in storm water runoff, surface water bodies, locations where significant materials are exposed to precipitation, locations where major spill or leaks may occur or did occur and locations of the following activities: fueling stations, vehicles and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage, or disposal of wastes liquid storage tanks, processing areas and storage areas.

Identify the direction of flow of storm water and type of pollutants which are likely to be present in the storm water. Flows with a significant potential for causing erosion shall also be identified.

- (ii) Inventory of Exposed Materials - an inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water; method and location of on-site storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of any storm water treatment.
  - (iii) Spills and Leaks - a list of significant spills and leaks of toxic or hazardous pollutants within the past three years that have occurred at areas exposed to precipitation.
  - (iv) A summary of all existing sampling data describing pollutants in storm water discharges.
- c. Measures and Controls - the permittee shall develop a description of storm water management controls appropriate for this facility, and implement such controls. The controls shall address the following minimum components, including a schedule for implementing such controls. The implementation schedule shall be as expeditious as possible, but not later than five (5) months after permit issuance.
- (i) Good Housekeeping - good housekeeping that requires the maintenance of a clean, orderly facility.
  - (ii) Preventive Maintenance - a preventive maintenance program shall involve timely inspection and maintenance of storm water

management devices, as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters and ensuring appropriate maintenance of such equipment and systems.

- (iii) Spill Prevention and Response Procedures - if spills have a potential to occur, procedures for cleaning up spills shall be identified in the plans and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available.
- (iv) Inspections - qualified facility personnel shall be identified to inspect designated equipment and areas of the facility at appropriate intervals specified in the plan.

Qualified personnel shall have the training and experience in mechanics, engineering, electric circuitry, electronics or related disciplines (which may be demonstrated by state registration, professional certification or the satisfactory completion of accredited training programs) that is necessary to make sound judgments regarding the safe operation and maintenance of plant equipment.

A set of follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained.

- (v) Employee Training - facility personnel responsible for implementing the activities identified in the SWPPP shall complete a program of classroom instruction or on-the-job training on the storm water system. At a minimum, the training program shall provide adequate instruction on procedures for using, inspecting, repairing, cleaning and replacing storm water sewers and related equipment; and emergency conditions.
- (vi) Record Keeping and Internal Reporting Procedures - incidents such as spills, along with other information describing the quality and quantity of storm water discharges, shall be included in the records. Inspections and maintenance activities shall be documented and recorded.
- (vii) Non-storm Water Discharges - the plan shall include a certification that the storm water discharge and the storm drainage system has

been tested or evaluated for the presence of non-storm water discharges.

- (viii) Sediment and Erosion Control - the plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.
- (ix) Management of Runoff - the plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices used to divert, infiltrate, reuse or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures determined to be reasonable and appropriate shall be implemented and maintained.

#### **SECTION G. 85% BOD REDUCTION**

1. At least once during the term of this permit, the permittee shall demonstrate the sewage treatment plant's percent (%) removal efficiency for CBOD5 and TSS contained in Part I of this permit.
2. The demonstration shall be made as follows:
  - a. Percent removal shall be defined as a percentage expression of the removal efficiency across the wastewater treatment plant for CBOD5 and TSS, as determined from the thirty-day average values of the influent concentrations to the facility and the thirty-day average effluent pollutant concentrations. The percent removal shall be calculated for Outfall 002 only.
  - b. Wet weather shall be defined for this specific requirement as a day in which the plant influent flow rate equals 511 mgd or greater at some time during the day.
  - c. Influent CBOD5 and TSS samples shall be collected using the same sample type and in accordance with the provisions found in Part I of this permit. The data collected in accordance with Part I of the permit may be used to demonstrate the percent removal efficiency. The permittee shall select a 30-day period which includes both dry weather and wet weather conditions.
  - d. Influent CBOD5 and TSS sampling shall be performed over the same time period as effluent CBOD5 and TSS sampling.